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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,031	01/16/2004	Kenneth J. Courian	200207719-1	8501

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INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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GARCIA JR, RENE

ART UNIT	PAPER NUMBER
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2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.		Applicant(s)	
	10/760,031		COURIAN ET AL.	
	Examiner		Art Unit	
	Rene Garcia, Jr.		2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 13-17, 26-30, 37-43, 78 and 79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13-17, 26-30, 37-43, 78 and 79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobs (US 6,271,926).

#### **Jacobs discloses the following claimed limitations:**

\*regarding claim 1, receiving user input associated with a single printmode selection (fig. 7 & 8; col. 2, lines 27-37; col. 8, lines 21-41)

\*mapping said printmode selection to a plurality of parameter values associated with the selected printmode (fig. 7; col. 8, lines 21-41 – brightness and contrast are parameter values)

\*simultaneously displaying feedback separately (fig. 7; brightness and contrast each have their own display bar associated with – recitation of separately does not define what separately includes/excludes) for each of the parameter values associated with consequences of said printmode selection (fig. 7; col. 7, lines 50-61; col. 7, line 66- col. 8, line 13 – visual representation of selections lets user know what output parameters have been selected)

\*regarding claim 3, act of receiving is performed using a soft user interface (col. 2, lines 27-37; col. 3, lines 12-13; fig. 7)

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\*regarding claim 4, act of receiving is performed by at least one printer (image forming device,4; printer,20 part of image forming device; fig. 1 & 2; col. 3, lines 26-31; col. 4, lines 1-3)

\*regarding claim 5, act of receiving is performed by at least one host computer in operable communication with at least one printer (col. 7, lines 61-67; col. 8, lines 7-13)

3. Claims 14, 15, 16, 26-29, 37, 38, 40, 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Moro et al. (US 6,327,051).

**Moro et al. discloses the following claimed limitations:**

\*regarding claims 14, 27 and 38, receiving selection of a single printmode that is not a pre-defined printmode for a particular printer (col. 2, lines 58-62)

\*simultaneously displaying feedback separately for each of a plurality of parameter values associated with the printmode selection (col. 2, line 66- col. 3, line 6; fig. 22 shows display for providing feedback [show what was selected]; “separately” as claimed is broad and leaves the display to be [with respect to fig. 22] each section/tab is separately displaying feedback and so is each tab page being broken down by a subsection: print quality separated by a line from paper feed method, which is separated by a line from dither setting; separated from cartridge selection by a line)

\*regarding claims 15, 28 and 41, act of receiving comprises receiving input pertaining to print quality (fig. 22 – col. 6, lines 32-34) and said act of displaying comprises simultaneously displaying feedback for both an ink or toner density value and a throughput value (value has not

been specified as a numerical representation – resolution relates to density and printing mode relates to throughput)

\*regarding claims 16, 29 and 42, act of receiving comprises receiving input pertaining to throughput (fig. 22 – printing quality affects throughput i.e. more quality longer time shorter throughput) and said act of simultaneously displaying comprises displaying feedback for both a throughput value and an ink or toner density value (value has not been specified as a numerical representation – resolution relates to density and printing mode relates to throughput)

\*regarding claims 26 and 37, saving a printmode selection as a user-defined print mode (fig. 2; col. 6, lines 52-63)

\*regarding claim 40, printmode selection component comprises at least one soft control (col. 6, lines 28-38)

\*further regarding claims 27 and 40, one or more computer-readable media having computer-readable instructions thereon which, when executed by one or more processors, cause the one or more processors to execute a method (fig. 1, 10 & 17; col. 8, line 63- col. 9, line 17)

\*further regarding claim 38, user interface component comprising:

\*printmode selection component (col. 6, lines 28-30; fig. 1)

\*user feedback component discrete from the printmode selection component (fig. 22; printing quality section has a “resolution and printing mode” display section to right of selection component to display more detail with regard to selection)

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 6,271,926) in view of Takemura et al. (US 5,988,784).

**Jacobs disclose all the claimed limitations except for the following:**

\*regarding claim 2, act of receiving is performed using a hard user interface

**Takemura et al. discloses the following:**

\*regarding claim 2, act of receiving is performed using a hard user interface/**switches, 801, 802 & 803/** (fig. 14; col. 12, lines 49-51) for the purpose of controlling parameters for adjusting printing quality

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize act of receiving is performed using a hard user interface as taught by Takemura et al. into Jacobs for the purpose of controlling parameters for adjusting printing quality

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 6,271,926) in view of Moro et al. (US 6,327,051).

**Jacobs discloses the following claimed limitations:**

\*regarding claims 6 & 7, act of displaying comprises displaying feedback that includes a throughput value (fig. 7; image quality of “resolution” selection leads to throughput has to slow down to print higher resolution)

\*regarding claim 7, act of receiving comprises receiving user input associated with throughput (fig. 7; image quality of “resolution” selection leads to throughput has to slow down to print higher resolution)

**Jacobs does not disclose the following claimed limitations:**

\*regarding claims 6 and 7, act of receiving comprises receiving user input associated with ink density and said act of displaying comprises simultaneously displaying feedback for both an ink or toner density value

**Moro et al. discloses the following:**

\*regarding claims 6 and 7, act of receiving comprises receiving user input associated with ink density and said act of displaying comprises simultaneously displaying feedback for both an ink or toner density value for the purpose of printing high quality images without lowering throughput (fig. 22; col. 6, lines 32-34; value has not been specified as a numerical representation – resolution relates to density and printing mode relates to throughput)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize act of receiving comprises receiving user input associated with ink density and said act of displaying comprises simultaneously displaying feedback for both an ink or toner density value as taught by Moro et al. into Jacobs for the purpose displaying the selection(s) made as visual confirmation to user to properly setup printer for printing image

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7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 6,271,926) in view of Winter et al. (US 6,040,927).

**Jacobs disclose all the claimed limitations except for the following:**

\*regarding claim 8, at least one of the parameter values is associated with error hiding

**Winter et al. discloses the following:**

\*regarding claim 8, at least one of the parameter values is associated with error hiding/**error diffusion**/ (fig. 6; col. 2, lines 36-46; col. 3, lines 38-49) for the purpose of producing high quality images

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize at least one of the parameter values is associated with error hiding as taught by Winter et al. into Jacobs for the purpose of producing high quality images.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 6,271,926) in view of Narendranath et al. (US 5,751,433).

**Jacobs disclose all the claimed limitations except for the following:**

\*regarding claim 13, effecting printing using the selected printmode

**Narendranath et al. discloses the following:**

\*regarding claim 13, effecting printing using the selected printmode (fig. 3 & 4; col. 8, lines 6-55) for the purpose of lowering toner usage and print time

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize effecting printing using the selected printmode as taught by Narendranath et al. into Jacobs for the purpose of lowering toner usage and print time



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9. Claims 17, 30 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moro et al. (US 6,327,051) in view of Hirabayashi et al. (US 6,050,674).

**Moro et al. discloses the following claimed limitations:**

\*regarding claims 17, 30 and 43, act of receiving comprises receiving input pertaining to print quality and/or throughput (fig. 22)

**Moro et al. does not disclose the following claimed limitations:**

\*regarding claims 17, 30 and 43, act of simultaneously displaying feedback for two or more of a scan speed parameter value, a print mask value, a nozzle firing frequency value, a drops per pixel value, or a scan direction value

**Hirabayashi et al. discloses the following:**

\*regarding claim 17, 30 and 43, act of simultaneously displaying feedback for two or more of a scan speed parameter value (quality of print affects speed – high quality slower print, high speed lower print quality), a print mask value (color option determines how nozzles are to be fired and which nozzles are fired), a nozzle firing frequency value, a drops per pixel value, or a scan direction value (fig. 9; value has not been recited to be a numerical therefore a label associated with properties leads to a value which possibly is linked to a numerical value transparent to the user)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize an act of simultaneously displaying feedback for two or more of a scan speed parameter value, a print mask value, a nozzle firing frequency value, a drops per pixel value, or a scan direction value as taught by Hirabayashi et al. into Moro et al. for the purpose of allowing user to know what selection(s) has been made

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10. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moro et al. (US 6,327,051) in view of Takemura et al. (US 5,988,784).

**Moro et al. disclose all the claimed limitations except for the following:**

\*regarding claim 39, printmode selection component comprises at least one hard control

**Takemura et al. discloses the following:**

\*regarding claim 39, printmode selection component comprises at least one hard control /switches, 801, 802 & 803/ (fig. 14; col. 12, lines 49-51) for the purpose of controlling parameters for adjusting printing quality

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize printmode selection component comprises at least one hard control as taught by Takemura et al. into Moro et al. for the purpose of controlling parameters for adjusting printing quality

11. Claims 78 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moro et al. (US 6,327,051) in view of Narendranath et al. (US 5,751,433) and Castelltort et al. (WO 02/019261 A1)

**Moro et al. disclose the following claimed limitations:**

\*regarding claim 78, user interface component comprising:

\*throughput control configured to enable the user to make a selection between print speed and quality

\*color/mono control configured to enable the user to select printheads that are used for printing (fig. 2 & 21; col. 18, lines 18-19; col. 24, lines 7-11)

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\*feedback window discrete from the controls configured to provide a user with feedback on each of ink density/**dither**/, throughput/**printing quality**/, alternate printmode/**printing quality**/ and color/mono/**cartridge selection**/ associated with selections made by the user (fig. 22; col. 6, lines 28-38; with regards to discrete - printing quality section has a “resolution and printing mode” display section to right of selection component to display more detail with regard to selection)

\*regarding claim 79, feedback includes a printmode name indicating ink density/**dither**/, throughput/**printing quality**/, alternate printmode/**printing quality**/ and color/mono/**cartridge selection**/ settings (fig. 22)

**Moro et al. does not disclose the following claimed limitations:**

\*regarding claim 78, simultaneously providing feedback on each of ink density, throughput, alternate printmode and color/mono associated with selection made by the user

\*ink density control configured to allow a user to select an amount of ink that is to be placed on a print media

\*alternate printmode control configured to enable the user to select between multiple print masks for a given printmode

**Narendranath et al. discloses the following claimed limitations:**

\*regarding claim 78, user interface component comprising:

\*ink density control configured to allow a user to select an amount of ink that is to be placed on a print media (fig. 3 & 4; col. 8, lines 6-55) for the purpose of lowering toner usage and print time

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize ink density control configured to allow a user to select an amount of ink that is to be placed on a print media as taught by Narendranath et al. into Moro et al. for the purposes of lowering toner usage and print time; easily identifying print modes

**Castelltort et al. discloses the following:**

\*regarding claim 78, alternate printmode control configured to enable a user to select between multiple print masks/color maps/ for a given printmode (page 2, lines 16-20; page 4, lines 22-24; page 25, lines 26-32;fig. 6) for the purpose of achieving maximum output quality on a particular medium

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize alternate printmode control configured to enable the user to select between multiple print masks for a given printmode as taught by Castelltort et al. (WO 02/019261 A1) into Moro et al. for the purpose of achieving maximum output quality on a particular medium

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize simultaneously providing feedback on each of ink density, throughput, alternate printmode and color/mono associated with selection made by the user since it is known in the art to display pertinent information related to printing parameters and is a matter of design choice on which parameters are shown on a given screen/feedback/. As can be seen by looking at various feedback windows/screens in Moro et al. and Jacobs (US 6,271,926).

*Response to Arguments*

12. Applicant's arguments filed 20 November 2006 have been fully considered but they are not persuasive.

13. Applicant's arguments on page 7 related to Jacobs (US 6,271,926) teaching simultaneously displaying feedback "for the effect of both brightness and contrast of selecting just one of brightness or contrast as the single printmode" are not considered persuasive. Figure 7 has a section under heading "Image" with controls and feedback under the heading. While the section does have a smaller thumbnail preview of the image to the left that adjust accordingly to movement of contrast and/or brightness scroll bars settings, the separate feedback is provided with respect to the contrast scroll bar and brightness scroll bar. Each scroll bar has a range of -50 to +50 and the sliding portion of the bar has a visual value associated with it just above. It is not explicitly stated in the reference but is known in the art to associate a numerical value with the sliding portion to better establish where on the scale the selected value is, i.e. may show 20% when positioned to the right of zero. The adjustment of brightness or contrast does not require changing of other values included in determining final printmode however the values are shown on the screen at the same time. Claim limitations do not include that other parameter values must be adjusted based on a single parameter value change.

14. Applicant's arguments on page 7 related to Moro et al. (US 6,327,051) teaching simultaneously displaying feedback for plural parameters or for plural parameters associated with just a single printmode selection are not considered persuasive. Moro et al. teaches displaying at all times settable values and being displayed in an emphasized manner (col. 3, lines 33-35; fig. 13, 22). Moro et al. does teach that items that cannot be set by the operator are

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present in the printing system, however claim limitations do not specify that such items be displayed. Otherwise such a limitation would require any parameter value that is associated with printing is to be displayed, such as paper feed motor speed, carriage motor feed speed, nozzle firing frequency, etc.. Moro et al. displays only those items [parameters] that are user settable and relevant for user control of printing. The feedback provided by Moro et al. is in the form of “emphasized” items (fig. 13) and visual representations such as scroll bars or headings listing selection(s) (fig. 22 – under printing quality heading has scroll bar and then to right of scroll bar has “Resolution” and “Printing Mode” that display settings related to scroll bar selection).


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*Communication with the USPTO*

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Garcia, Jr. whose telephone number is (571) 272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Rene Garcia Jr  
01/07

  
**STEPHEN MEIER**  
**SUPERVISORY PATENT EXAMINER**